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In the Supreme Court of the United States

J.E.M. AG SUPPLY, INC. (DOING BUSINESS AS FARM ADVANTAGE, INC.), FARM ADVANTAGE, INC., LARRY BENZ, MERLE PRUETT (DOING BUSINESS AS SIOUXLAND SEEDS, INC.), KEVIN WOLFSWINKEL, TIM KAMSTRA, AND TOM EISCHEN SEED & CHEMICALS,

Petitioners,

v.

PIONEER HI-BRED INTERNATIONAL, INC.,

Respondent.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

BRIEF *AMICUS CURIAE* OF MONSANTO COMPANY IN SUPPORT OF THE RESPONDENT

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INTEREST OF AMICUS CURIAE[1]

Amicus Curiae Monsanto Company ("Monsanto") is an agricultural solutions company based in St. Louis, Missouri. Monsanto supplies farmers worldwide with several herbicide products including Roundup®, the world's top-selling herbicide. Monsanto also supplies seeds for a wide range of crops. In some seed markets, Monsanto is a leading competitor of the respondent, Pioneer Hi-Bred International, Inc. ("Pioneer").

Monsanto is a world leader in developing genetically-engineered plants, and owns various U.S. utility patents covering synthetic or artificial genes that provide plants with resistance to such things as insect predators and herbicides. Monsanto also owns U.S. utility patents on sexually reproduced plants of the type at issue here; *i.e.*, those developed by man through plant breeding to yield new varieties not found in nature but which do not contain any synthetic, artificial or genetically-engineered components.

Monsanto is 85% owned by Pharmacia Corporation. While Monsanto has no financial interest in this case, Petitioners have noted that Monsanto is interested in, and may be affected by, the resolution of the legal issue before the Court. *See, e.g.*, Petition For Writ Of Certiorari, No. 99-1996, at 20 (filed June 12, 2000). Monsanto also has wholly-owned subsidiaries, including Asgrow Seed Company and DEKALB Genetics Corporation, with similar interests. Monsanto and such subsidiaries are also parties to pending patent litigation in which the legal question to be resolved in this case may become relevant.

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[1] Letters from all parties consenting to the filing of this brief have been filed with the Clerk. No counsel for a party authored this brief, in whole or in part, and no person or entity other than *Amicus Curiae*, or its counsel, made a monetary contribution to its preparation or submission.

SUMMARY OF ARGUMENT

Under the ordinary meaning of the statutory terms in 35 U.S.C. § 101 that have defined the scope of patentable subject matter since the nation's patent laws were first enacted over 200 years ago, a sexually reproduced plant is clearly a "composition of matter." Moreover, a sexually reproduced plant developed by a plant breeder that is not found in the wild is also a "manufacture" within the meaning of the statute. Thus, the unambiguous terms in Congress' statutory definition are properly interpreted to encompass new and useful varieties of sexually reproduced plants resulting from man's plant breeding techniques.

That legal conclusion follows directly from this Court's analysis of section 101 in *Diamond v. Chakrabarty*, 447 U.S. 303 (1980), which held that a man-made micro-organism "constitutes a 'manufacture' or 'composition of matter' within the meaning of the statute." Notably, the asserted patents in this case do not involve any "transgenic" plants resulting from genetic engineering (*i.e.*, synthetically modifying a plant's DNA) or other means of molecular modification like the claimed micro-organism at issue in *Chakrabarty*. But even upon limiting the present controversy to its true scope, the plain meaning of that same statutory language leaves no doubt that "non-transgenic" sexually reproduced plants created by man's plant breeding efforts are patentable subject matter under the utility patent laws, which thus can be validly patented when the other statutory conditions for patentability are met.

Petitioners never try to explain why sexually reproduced plants created through plant breeding are not a "manufacture" or a "composition of matter" falling squarely within the express terms of section 101. Instead, Petitioners argue that Pioneer's asserted utility patents covering corn

seed products should be held invalid because Congress later intended to exclude or excise sexually reproduced plants from the scope of patentable subject matter under 35 U.S.C. § 101 when it enacted the Plant Patent Act ("PPA") in 1930 and the Plant Variety Protection Act ("PVPA") in 1970. However, not only is the contrary conclusion compelled by *Chakrabarty*, but it is confirmed by Congress' own analyses when it enacted the separate and distinct statutory protections under the PPA and the PVPA.

Seeking to encourage innovation and private investment in plant breeding, Congress enacted the PPA to negate any perceived "products of nature" exception to section 101 and to "relax" the written description requirements for asexually reproduced plants. That is all. Congress had no reason to analyze, address or amend section 101, and gave no indication of any intention of doing so. When Congress' statutory amendments under the PPA are examined in light of its purpose, its specific and limited statutory changes should not be construed today as evidencing a silent intent by Congress to change the meaning of the terms originally in section 101.

Finally, Congress' enactment of the PVPA in 1970 also cannot be construed as showing that Congress restricted the scope or the meaning of the patent laws. Just as the PPA only "relaxed" the description requirements for asexually reproduced plants, the PVPA granted lesser rights to inventors of sexually reproduced plants in exchange for a lower showing of novelty and a less rigorous disclosure. The admitted differences between the application requirements and the rights granted under the patent laws and under the PVPA demonstrate that those two bodies of law are easily reconciled short of finding any implied repeal by the PVPA of the distinct coverage under the patent laws.

ARGUMENT

I. THIS CASE RAISES WHETHER SEXUALLY REPRODUCED PLANTS RESULTING FROM PLANT BREEDING ARE WITHIN THE STATUTORY LANGUAGE OF SECTION 101

Because a plant breeder is an "inventor" and because sexually reproduced plants are patentable subject matter under the express terms of section 101, Petitioners' challenge to Pioneer's utility patents on various sexually reproduced corn plants and seeds should be rejected and the Federal Circuit's judgment should be affirmed. In addition to explaining why that result is compelled as a matter of law by the statute, Monsanto believes that it is important to add a further scientific perspective to the statutory interpretation issue before the Court.

For purposes of this brief, Monsanto uses the term "sexually reproduced plants" to refer only to non-wild, non-genetically engineered, sexually propagated plants that are obtained solely by plant breeding techniques, *i.e.*, horticultural methods that rely on the plant breeder's judgment, testing, selection, and other efforts to exploit the plants' natural sexual reproduction processes in producing new varieties. Monsanto respectfully submits that use of such terminology reflects the true scope of the important but narrow question presented by this case.

Unlike the "transgenic" plant and seed products invented and marketed by Monsanto, Pioneer's patents cover sexually reproduced corn plants and seeds that are "non-transgenic," *i.e.*, that have not been synthetically modified, as through genetic engineering. Instead, Pioneer's patented plants were developed using plant breeding techniques, such

as where a plant breeder selects two natural plants to cross and "grow[s] the parent plants in juxtaposition" to produce an offspring containing no genetically-engineered components but which would not have been produced by nature without man's involvement. *See* S. Rep. No. 315, 71st Cong., 2d Sess. 7 (1930) ("1930 Senate Report").

As this Court explained in *Chakrabarty*, "the relevant distinction [is] not between living and inanimate things, but between products of nature, whether living or not, and human made inventions." 447 U.S. at 313. As an example of the former, "a new plant found in the wild is not patentable subject matter." 447 U.S. at 309. However, a sexually reproduced plant that has been transgenically modified, such as by inserting synthetic genes or genes not naturally found in that plant species, is legally indistinguishable from the "human-made, genetically engineered bacterium" in *Chakrabarty*. *Id.* at 305. The latter was readily perceived by this Court as being a "manufacture" or "composition of matter" that represented the handiwork of man and thus was statutory subject matter under section 101 even though it was also a living thing. *Id.* at 309-10.

In *Chakrabarty*, this Court rejected the argument that Congress' enactments of the PPA and the PVPA (which specifically excluded "bacteria") evidenced Congress' understanding that the terms "manufacture" and "composition of matter" did not include living things. 447 U.S. at 311. However, because *In re Arzberger*, 112 F.2d 834 (C.C.P.A. 1940), had held that bacteria were not "plants" under the PPA, see 447 U.S. at 314, the petitioner in *Chakrabarty* argued that all living things were outside section 101, regardless of any man-made or synthetically engineered components. Just as the parties in *Chakrabarty* overstated that question presented as being whether Congress intended for all living things or for no livings things to be

patentable, see *In re Bergy*, 596 F.2d 952, 975-76 (C.C.P.A. 1979), it is overstatement to posture the question in this case as raising whether all sexually reproduced plants – transgenic and non-transgenic alike – are statutory subject matter or whether none are.

For example, it has been argued in this case that "[t]he broader coverage available through Section 101 is increasingly important in light of advances in genetic engineering, such as the use of recombinant DNA technology to develop utility-patented plants having improved insecticidal properties" and that "[t]he breadth of coverage afforded by utility patents may be essential in some circumstances to protect plant inventions produced by genetic engineering." Brief for the United States As *Amicus Curiae*, at 10 n.5 (filed Jan. 17, 2001). While patent coverage is indeed important to encourage the significant innovation and investment involved in creating "transgenic" inventions, this case simply does not involve the propriety of utility patent coverage for any aspect of genetic engineering with respect to any type of plant.

As explained in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1372 n.6 (Fed. Cir. 1998), *cert. denied*, 525 U.S. 1093 (1999):

> The dispositive inquiry is whether the claim as a whole is directed to statutory subject matter. It is irrelevant that a claim may contain, as part of the whole, subject matter which would not be patentable by itself. "A claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula, computer program, or digital computer." [*Diamond v. Diehr*, 450 U.S. 175, 187 (1981)].

The claimed invention in *State Street Bank* did not become nonstatutory merely because it involved a process or algorithm for manipulating numbers.[2] 149 F.3d at 1374-75. Similarly, a sexually reproduced plant that has been modified with a new and useful synthetic gene would not be rendered nonstatutory, even if the plant by itself were held not to be patentable subject matter under section 101.

For that reason, any arguments offered on either side of this case premised upon the existence or importance of the "transgenic" biotechnology industry that was sparked by *Chakrabarty* are irrelevant to the statutory construction issue before this Court. Whatever outcome may result in this Court, the still-developing technologies utilizing genetic engineering are not implicated here and thus should not be affected by a case that does not present any controversy over any such "transgenic" inventions. In any event, upon turning to the question that is truly at issue, Congress has confirmed that a plant breeder is an "inventor" under the Constitution and the patent laws, and that "non-transgenic" sexually reproduced plants can be patentable subject matter under the express terms of section 101.

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[2] *See, e.g., Parker v. Flook*, 437 U.S. 584, 590 (1978) ("[A] process is not unpatentable simply because it contains a law of nature or a mathematical algorithm."); *Mackay Radio & Telegraph Co. v. Radio Corp. of America*, 306 U.S. 86, 94 (1939) ("While a scientific truth, or the mathematical expression of it, is not a patentable invention, a novel and useful structure created with the aid of knowledge of scientific truth may be.").

II. PLANT BREEDERS ARE "INVENTORS" UNDER THE CONSTITUTION AND THE LANGUAGE OF SECTION 101

"Congress shall have the power . . . To promote the Progress of Science and useful Arts, by securing for limited times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." U.S. CONST., Art. I, sec. 8, cl. 8. The constitutional reference to "invention" is also reflected in the statutory language:

> Whoever invents or discovers any new or useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

35 U.S.C. § 101. Until this case, however, no federal court had directly addressed whether sexually reproduced plants achieved by plant breeding are statutory subject matter.

The language now found in 35 U.S.C. § 101 defining patentable subject matter has been substantively unchanged since it was first enacted. As summarized in *Chakrabarty*:

> The Patent Act of 1793, authored by Thomas Jefferson, defined statutory subject matter as "any new and useful art, machine, manufacture, or composition of matter, or any new or useful improvement [thereof]." Act of Feb. 21, 1793, § 1, 1 Stat. 319. ... Subsequent patent statutes in 1836, 1870, and 1874 employed the same broad language. In 1952, when the patent laws were recodified, Congress replaced the word "art" with "process," but otherwise left Jefferson's language intact. The Committee Reports accompanying the 1952 Act inform us that Congress intended statutory subject matter to "include anything under the sun that is made by man."

447 U.S. at 308-09. Clearly, sexually reproduced plants can be found somewhere "under the sun." Hence, the question is whether new and useful varieties of sexually reproduced plants resulting from the evolving techniques of plant breeding are "made by man." That inquiry has been resolved in the affirmative by Congress' explicit recognition that a plant breeder is indeed an "inventor."

When Congress enacted the PPA, the legislative history included a detailed analysis why those amendments to the patent laws fell within Congress' legislative power under Article I. *See* 1930 Senate Report, at 6-9. As stated therein, "[t]here can be no doubt that the grant of plant patents constitutes a promotion of 'the progress of science and useful arts' within the meaning of the constitutional provision." *Id.* at 6. Moreover, that is true for all patents granted under Title 35, whether on sexually reproduced plants or other technology, because all patents have been required by Congress to be new, useful, and satisfy the other conditions of patentability.[3]

Congress realized in 1930 that the "only question" was "Is the new variety a discovery and is the originator or

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[3] No further Congressional inquiry into whether a specific type of invention promotes progress is required. Section 101 is to be given a "wide scope" because Congress cannot know what future technological advances will result in patentable invention. *See Chakrabarty*, 447 U.S. at 308; *Bergy*, 596 F.2d at 974 (noting that the Founding Fathers and past Congresses could not have foreseen the technologies that have allowed man to walk on the moon, cure diseases, and use pocket calculators).

discoverer an inventor?" 1930 Senate Report, at 6. Congress then explained at length why "there is no apparent difference ... between the part played by the plant originator in the development of new plants and the part played by the chemist in the development of new compositions of matter which are patentable under existing law." *Id.* at 7.

> Obviously, these new compositions of matter do not come into being solely by act of man. The chemist who invents the composition of matter must avail himself of the physical and chemical qualities inherent in the materials used and of the natural principles applicable to matter. Whether or not he is aware of these principles does not affect the question of patentability. . . .
>
> The same considerations are true of the plant breeder. He avails himself of the natural principles of genetics and of seed and bud variations. He cultivates the plants in his own laboratory under his own eye. He may test and experiment with them on a variety of proving grounds. He may promote natural cross-pollination by growing the parent plants in juxaposition. . . . Finally, the plant breeder must recognize the new and appreciate its possibilities either for public use or as a basis for further exercise of the art of selection.

1930 Senate Report, at 7. Notably, the above analysis as to why a plant breeder is an "inventor" does not distinguish between sexual or asexual reproduction, and thus applies equally to both situations.

Congress reasonably concluded that the development of a new plant by a plant breeder and the development of a

new composition of matter by a chemist are comparable acts of "invention" or "discovery" for purposes of the Constitution and the patent laws.

> But even were the plant developer's contributions in aid of nature less creative in character than those of the chemist in aiding nature to develop a composition of matter which has theretofore been non-existent (an assumption which the committee does not believe to have basis in fact and which is here made solely for purposes of argument), nevertheless, the protection by patents of those engaged in plant research and discovery would not be beyond the constitutional power of the Congress.

1930 Senate Report, at 7-8. Thus, unless Congress exceeded its constitutional authority when passing the PPA and the PVPA (which it did not), Congress necessarily had the legislative power to include some or all forms of plants as statutory subject matter under the patent laws -- which its original statutory language did.

III. UNDER THE PLAIN MEANING OF THE STATUTORY LANGUAGE IN SECTION 101, SEXUALLY REPRODUCED PLANTS PRODUCED BY PLANT BREEDING ARE A "MANUFACTURE" OR A "COMPOSITION OF MATTER"

Petitioners never deny that sexually reproduced plants are a "manufacture" or a "composition of matter" within the express terms of section 101. As discussed *infra*, Petitioners argue that Congress should be viewed as having intended to

exclude such plants from being statutory subject matter under the patent laws because it enacted the later, more "plant-specific" statutes. Indeed, that argument implicitly recognizes that plants bred by man otherwise fall within the broad scope of the terms recited in section 101.

In *Chakrabarty*, this Court decided the "narrow" issue of statutory construction that "respondent's micro-organism constituted a 'manufacture' or 'composition of matter' within the meaning of the statute." 447 U.S. at 307. Similarly, this case poses whether sexually reproduced plants created by plant breeding are a "manufacture" or "composition of matter" within the meaning of section 101. As shown below, the legal analysis in *Chakrabarty* leads to the same conclusion in this case as was reached in 1980.

The claimed invention in *Chakrabarty* was a "human-made, genetically engineered bacterium ... capable of breaking down multiple components of crude oil." 447 U.S. at 305. The Patent Office ("PTO") examiner rejected the claims because micro-organisms were "products of nature" and because "living" things were not patentable subject matter under section 101. 447 U.S. at 306. The Board affirmed on the latter ground, concluding that the legislative history of the PPA showed Congress did not intend section 101 to cover living things such as the laboratory-created micro-organisms at issue. *See* 447 U.S. at 306.

As with any issue of statutory construction, this Court's analysis in *Chakrabarty* began with the language of the statute. 447 U.S. at 308 (citation omitted).

> "[U]nless otherwise defined, words will be interpreted as taking their ordinary, contemporary meaning common meaning." *Perrin v. United States*, 444 U.S. 37, 42 (1979).

> We have also cautioned that courts "should not read into the patent laws limitations and conditions which the legislature has not expressed." *United States v. Dubilier Condensor Corp.*, 289 U.S. 178, 199 (1933).

447 U.S. at 308. The Court reiterated its adoption of common meanings for the terms "manufacture" and "composition of matter."[4] *Id.* The Court also stressed that "[i]n choosing such expansive terms as 'manufacture' and 'composition of matter,' modified by the comprehensive 'any,' Congress plainly contemplated that the patent laws would be given a wide scope." *Id.*

Without deciding whether the claimed man-made micro-organism in *Chakrabarty* was better viewed as being a "manufacture" or a "composition of matter" for purposes of section 101, the Court held:

> [R]espondent's micro-organism plainly qualifies as patentable subject matter. His claim is not to a hitherto unknown natural phenomenon, but to a nonnaturally occurring manufacture or composition of matter -- a product of human ingenuity "having a distinctive name, character [and] use." ... [T]he patentee has produced a new bacterium with markedly different characteristics

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4 "Manufacture" is interpreted as being "the production of articles for use from raw or prepared materials by giving to these properties new forms, qualities, properties, or combinations, whether by hand-labor or by machinery." 447 U.S. at 308 (citing *American Fruit Growers, Inc. v. Brogdex Co.*, 283 U.S. 1 (1931)). "Composition of matter" was given its ordinary meaning to include "all compositions of two or more substances and ... all composite articles, whether they be the results of chemical union, or of mechanical mixture, or whether they be gases, fluids, powders, or solids." 447 U.S. at 308 (citations omitted).

> from any found in nature and one having the potential for significant utility. His discovery is not nature's handiwork, but his own; accordingly, it is patentable subject matter.

447 U.S. at 309-10. Because that micro-organism contained man-made plasmids produced by genetic engineering that were not naturally occurring, any need for further statutory construction was not necessary to the result in *Chakrabarty*.

IV. THE ARGUMENTS AGAINST PATENTABILITY REJECTED IN *CHAKRABARTY* ALSO DO NOT APPLY HERE

In enacting the PPA, Congress addressed two factors thought to remove plants from patent protection prior to 1930. 447 U.S. at 311. The first was that plants, even those artificially bred, were "products of nature" not subject to patent protection. *Id.* at 311-12 & n.8. The second was that plants were thought not amenable to the "written description" requirement of the patent law. 447 U.S. at 312 (citing 35 U.S.C. § 112). The reasoning of *Chakrabarty* shows that neither factor provides any basis for reversing the Federal Circuit's judgment in this case.

A. Any "Product Of Nature" Exception To Section 101 Is Limited To Matter Created By Nature And Found In The Wild

Congress explained at length why the work of the plant breeder "in aid of nature" was patentable invention. *See* 1930 Senate Report, 6-8. As shown *supra*, that analysis establishes the plant breeder as an "inventor" under the patent laws. More importantly, *Chakrabarty* limited any

"product of nature" exception to that which is truly found in or created by nature alone.

> This is not to suggest that § 101 has no limits or that it embraces every discovery. The laws of nature, physical phenomena, and abstract ideas have been held not patentable. Thus, a new mineral discovered in the earth or a new plant found in the wild is not patentable subject matter. . . . Such discoveries are "manifestations of . . . nature, free to all men and reserved exclusively to none."

447 U.S. at 309 (citations omitted); *see In re Alappat*, 33 F.3d 1526, 1543 (Fed. Cir. 1994) (*en banc*) (noting that the Supreme Court has not created any additional categories of subject matter excepted from section 101).

In the PPA, Congress did not protect "newly found" plant varieties because a person discovering such plant "has in no way engaged either in plant cultivation or care and who has in no other way facilitated nature in the creation of a new and desirable variety." 1930 Senate Report, at 7.

> There is a clear and logical distinction between the discovery of a new variety of plant and of certain inanimate things, such, for example, as a new and useful natural mineral. The mineral is created wholly by nature unassisted by man ... On the other hand, a plant discovery resulting from cultivation is unique, isolated, and is not repeated by nature, nor can it be reproduced by nature unaided by man . . . .

Id. at 5. Citing that history, this Court in *Chakrabarty* held that the relevant distinction for purposes of patentable subject

matter was "between products of nature, whether living or not, and human made inventions." 447 U.S. at 313.

As realized by Congress, a plant breeder may avail himself of the natural principles of genetics, but it is the breeder that selects which parent plants to cross in a manner and combination that nature would not be able to do on its own. *See* 1930 Senate Report, at 6-7. For example, a breeder might cross a plant from Maine with a plant with other desirable traits from Texas in hopes of creating a variety with new traits suitable for Oregon. Nature itself could not cross-pollinate such plants in juxtaposition. *Id.* Without man's judgment, selection, and testing, such new varieties would not be created. Thus, any "product of nature" exception to section 101 should not be extended to foreclose sexually reproduced plants created by man's plant breeding from being patentable subject matter.

B. Any Issue Whether The Claimed Plants Meet The Statutory Conditions For Patentability Does Not Implicate Whether Such Plants Are Patentable Subject Matter

In enacting the PPA, Congress also addressed the perception that plants could not be claimed in a manner that would satisfy 35 U.S.C. § 112 by relaxing the "written description" requirement for asexually reproduced plants to "a description ... as complete as is reasonably possible." 35 U.S.C. § 162. While the statutory conditions for patentability have not been "relaxed" for any other type of invention, any inability or difficulty for a particular invention, including sexually reproduced plants, to meet the statutory conditions has no bearing on whether the subject matter of such invention is within the statutory scope of section 101.

Other than "utility," the only relevant inquiry under section 101 is whether the claimed subject matter falls in at least one of the statutory categories. *See State Street Bank*, 149 F.3d at 1375 & n.9. Considerations of novelty, obviousness, or other statutory patentability conditions are irrelevant to determining whether the claim is directed to "statutory subject matter."[5] *See Parker*, 437 U.S. at 593 (explaining that inquiry into statutory subject matter under § 101 "must precede" any inquiries into whether conditions of patentability are met).

Since *Chakrabarty*, the PTO has issued regulations governing biotechnology invention disclosures. *See* 37 C.F.R. §§ 1.801-.824. Such regulations are not directed to plant patents under the PPA, but specifically pertain to depositing biological material for purposes of patents for inventions under 35 U.S.C. § 101. 37 C.F.R. at § 1.801 ("the term biological material shall include material that is capable of self-replication either directly or indirectly"). The regulations further state that "[b]iological material need not be deposited unless access to such material is necessary for the satisfaction of the statutory requirements for patentability under 35 U.S.C. § 112." 37 C.F.R. § 1.802(a).

While plant breeding was known to Congress in 1793, it is the scientific advances in new fields, such as genetic mapping and gene fingerprinting, that now allow

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[5] In *Chakrabarty*, no "conditions and requirements" of "patentability" such as novelty under 35 U.S.C. § 102 or nonobviousness under 35 U.S.C. § 103 were before this Court. 447 U.S. at 307 n.5. The Federal Circuit also did not address any statutory conditions of patentability in this case, and none was raised to this Court. Pet. App. 9; *see State Street Bank*, 149 F.3d at 1372 n.2 (noting that compliance with § 101 is but the first door that must be opened on the difficult path to patentability) (citing *Bergy*, 596 F.2d at 960)).

plant inventors to describe and distinguish new varieties in a manner to satisfy the statutory conditions for utility patents. It should not be surprising that there was a lack of patent applications on plants prior to such advances. As the Federal Circuit summarized, "the precision of description is no longer an insurmountable obstacle, due both to [the PTO deposit rules], and advances in botanical understanding and analysis." Pet. App. 5. Thus, what has changed since 1800 is the ability of plant breeders to satisfy the requirements of the nation's patent laws that have applied to inventors in every other field for the past 200 years.

If the plant breeding discoveries of Thomas Jefferson and Luther Burbank could not be described so as to satisfy the utility patent laws, that did not mean that their new plants were not inventions or that those plants would not have been patentable subject matter if the technology had existed by which to satisfy the separate statutory conditions for patentability. If that distinction became blurred into a general belief that plants could not be patented, it was the belief that was in error. No decision of this Court ever adopted that belief. The statutory terms defining patentable subject matter have not changed. Such an erroneous belief regarding the scope of the patent laws, no matter how widely-held or long-standing, cannot control the statutory interpretation issue that has now reached this Court.

The patent law allows utility patents on discoveries beyond the anticipation or comprehension of Congress when it enacted the law in the first place. *See supra* note 3. At least for sexually reproduced plants, it is the technology needed to obtain patent protection rather than the technology used for creating the invention that has only recently caught up with the law. But even if the necessary science still had not yet advanced to the point that would allow plants to meet the disclosure requirements or the other statutory conditions,

there is no justification for ignoring or distorting the plain meaning of section 101 to excise plants from the realm of potentially patentable subject matter.

V. THE PPA AND THE PVPA DO NOT EVIDENCE CONGRESS' INTENT TO REMOVE PLANTS FROM THE SCOPE OF SECTION 101

Petitioners offer two additional arguments as to how Congress eliminated any utility patent protection for sexually reproduced plants. First, Petitioners argue that the statutory language in section 101 was amended when the PPA was enacted in 1930 to include a specific reference to asexually reproduced plants, which shows that the existing language did not encompass plants. Pet. Br. 19. Second, Petitioners assert that Congress enacted the PVPA in 1970 as a later and more specific statute for the "federal protection" of sexually reproduced plants, which shows Congress intended to exclude such plants from being statutory subject matter under the patent laws. Pet. Br. 13-28, 37-43. However, neither theory can alter the plain meaning of section 101.

"[A]bsent some clear indication that Congress focused on the issues ... directly related to the one presently before the Court, there is no basis for reading into its actions an intent to modify the plain meaning of the words found in § 101." *Chakrabarty*, 447 U.S. at 314 (quotation omitted). In that case, this Court noted that Congress had not focused on whether all living things were excluded from the patent laws when enacting the PPA and PVPA. *Id.* at 312-14. In enacting those laws, however, Congress also did not focus on delineating the scope of the subject matter falling within the language of section 101.

A big difference exists between Petitioners' argument that Congress "never intended seeds and seed grown plants to be the subject of utility patent protection" (Pet. Br. 9) and Congress' understanding the scientific reality that patents could not be obtained on plants without relaxing the conditions for patentability for certain plants (as in the PPA) or providing "patent-like" protection for other plants based on a lesser showing but less exclusive rights than available under the utility patent laws (as in the PVPA). *See Asgrow Seed Co. v. Winterboer*, 513 U.S. 179, 181 (1995). As shown below, neither "plant-specific" act conflicts with or alters the conclusion that sexually reproduced plants can be patentable subject matter under section 101.

A. The Statutory Amendments Under The PPA Must Be Viewed In Light Of The Specific Problems Being Addressed By Congress

Among Congress' purposes for the PPA were "to afford agriculture, so far as practicable, the same opportunity to participate in the benefits of the patent system as has been given industry" and to "stimulate plant development through private funds." 1930 Senate Report, at 1-2. Realizing that a new variety could be reproduced without restriction once it was released, Congress wanted to give private breeders an incentive to innovate, so that the public would benefit from new varieties and so private investment could reduce public funding for plant breeding. *Id.*

Amending, or even identifying, the true scope and meaning of section 101 was not part of Congress' undertaking. Rather, Congress' purpose was much narrower and was directed only to lowering the patentability hurdle for asexually reproduced plants, not on barring all other plants

from any potential patent protection. To be sure, Congress did add the language highlighted below to section 101:

> Any person who has invented or discovered any new and useful art, machine, manufacture, or composition of matter, or any new or useful improvements thereof, ***or who has invented or discovered and asexually reproduced any distinct and new variety of plant other than a tuber-propagated plant,*** ... may ... obtain a patent therefor.

Act of May 23, 1930, Pub. L. No. 71-245, ch. 312, sec. 1, 46 Stat. 376, 376. Petitioners isolate that single amendment and assert that it was intended to restrict the meaning of statutory language that had been unchanged for over 130 years. Surely Congress would not have amended the scope of patentable subject matter in utter silence.

According to Petitioners, "[i]f the patent laws before 1930 allowed patents on 'plants' then there would have been no reason for Congress to have passed the 1930 PPA." Pet. Br. 19. But as explained in *Chakrabarty*, the "reason" for passing the PPA was not to redefine patentable subject matter but was to "relax" the written description requirement so that asexually reproduced plants could satisfy the statutory conditions for patentability. 447 U.S. at 312. Contrary to Petitioners' view, it was the change to section 112 that was needed to enable patent protection to be obtained for plants even though plants already were patentable subject matter under section 101. That was the "reason" for the PPA, and its amendments cannot now be interpreted or given new meaning divorced from that purpose.

Moreover, the added phrase embodies Congress' lengthy analysis as to why plant breeders were "inventors"

for purposes of the Constitution and the patent laws. *See supra*. In light of the apparent view in 1930 that a "products of nature" exception applied to all plants (rather than just wild plants), Congress' decision to make explicit its confirmation that plants asexually reproduced by man were patentable subject matter under the terms of the statute should not be faulted in hindsight nor used now to reduce the original scope of the statute. Even now, section 161 provides that "[t]he provisions related to patents for inventions shall apply to patents for plants, except as otherwise provided," which confirms that "asexually reproduced plants" are within Title 35 and were simply a subset of the original statutory categories.

Petitioners still argue that "in passing the plant-specific PPA, [Congress] expressly stated its intent that the words 'art, machine, manufacture, or composition' … did not include 'plants.'" Pet. Br. 19. However, what Congress realized in 1930 was that patents were not being obtained on plants; all that Congress intended through the PPA was to alleviate that by confirming that plant breeders were inventors and by "relaxing" the description requirements for asexually reproduced plants. At no point in the PPA's legislative history is there any discussion that plants were not or should be removed from being potentially patentable subject matter under section 101.

Petitioners also suggest that a "new category" was added in 1930 because Congress intended that plants created by plant breeding did not fall into the four existing statutory categories. Pet. Br. 8. Not only did Congress also not state that view, but Petitioners assume that the statutory categories must be mutually exclusive. However, some inventions will be in multiple categories, such as being both a "machine" and a "manufacture." Indeed, this Court in *Chakrabarty* held that the claimed micro-organism was statutory without selecting

between "manufacture" or "composition of matter." 447 U.S. at 309. Because sexually reproduced plants can also be either one, the phrase concerning asexually reproduced plants added to the statutory language in 1930 does not support concluding that "sexually reproduced plants" could never be statutory subject matter.

Petitioners also argue that Congress' failure to extend the PPA to plants that propagated by seeds means that Congress (at least as of 1930) did not intend that such plants be statutory subject matter eligible for utility patent protection. Pet. Br. 32. However, the fact that Congress relaxed certain conditions for patentability for only asexually reproduced plants cannot be interpreted as having excluded sexually reproduced plants from the patent laws, but merely as having left the conditions of patentability for all other inventions, including sexually reproduced plants, unchanged. If inventors of sexually reproduced plants could not meet the "unrelaxed" conditions in 1930, it was not because Congress had eliminated any possibility that a utility patent could ever be granted on such plants once future plant breeders became able to satisfy those conditions.

Even so, Petitioners try to bolster their view of the significance of the PPA by noting that the 1952 Patent Act placed the definition of patentable subject matter in section 101 and moved the provisions unique to plants to 35 U.S.C. §§ 161-64. Pet. Br. 19-20. However, neither was a substantive change. *See* 35 U.S.C. § 101 (Revisor's note) ("Section 101 follows the wording of the existing statute as to the subject matter for patents, except that the reference to plant patents has been omitted for incorporation [in Chapter 15]."). Nevertheless, Petitioners argue that the absence of the word "plant" in section 101 and moving the prior reference to "asexually reproduced plants" shows that Congress intended

in 1952 to exclude sexually reproduced plants from being statutory subject matter. Pet. Br. 8, 20.

If any legal significance can be attributed to those 1952 amendments, it arises from section 101 being given the same substantive definition for patentable subject matter as the patent laws in 1793. That "return" to the original language indicates that neither the addition of the clause regarding "asexually reproduced plants" to the statutory definition of patentable subject matter in 1930 nor the removal of that clause in 1952 had any effect on the meaning and scope of the original statutory categories. Because the ordinary meanings of "manufacture" and "composition of matter" include sexually reproduced plants as potentially patentable subject matter, that meaning was not changed when Congress enacted the PPA in 1930.

B. The PVPA Provides No Basis For Restricting Or Repealing The Plain Scope Of Section 101

Petitioners argue that utility patents cannot cover sexually reproduced plants because Congress did not extend the patent laws to such plants when it passed the PVPA in 1970. Pet. Br. 11. However, the format of the PVPA, and its inclusion in Title 7, show only that Congress chose not to amend the patent laws as the means for affording a lesser bundle of rights to inventors of sexually reproduced plants that did not or could not meet the higher conditions for patentability under Title 35.

Petitioners agree that "[t]he utility patent standards are different than the PVPA standards." Pet. Br. 10. As the Federal Circuit explained, "the [PVPA] does not include the extensive examination system that is applied to applications for patents, contains several provisions specific to

agricultural crops, and is administered by the Department of Agriculture." Pet. App. 7. Petitioners point out that a plant variety can be protected under the PVPA provided it is new, distinct, uniform, and stable (7 U.S.C. § 2402) while stressing that utility patents on sexually reproduced plants are not issued under those four standards, but must meet the more stringent conditions for patentability in 35 U.S.C. §§ 102-103, 112. Pet. Br. 12. Thus, it is not disputed that Congress imposed distinct -- and clearly lower -- disclosure and novelty obligations for new varieties of sexually reproduced plants under the PVPA than are required under the patent laws.

Petitioners argue that owners of patented plants will have a statutory right to exclude others from doing acts that would be permitted if such varieties were protected only under the PVPA. Pet. Br. 11-12. Their two main examples are that (1) a farmer cannot save patented seed to replant on his own farm as permitted for seed protected only under the PVPA, 7 U.S.C. § 2543, and (2) the seed of a patented variety cannot be used in "bona fide research" as is permitted with seed protected only under the PVPA, 7 U.S.C. § 2544.[6] Pet. Br. 43-49. However, such differences merely show that Congress decided that more limited rights of exclusion were appropriate under the PVPA in light of the lower disclosure threshold for obtaining a PVPA certificate compared to what is required to obtain a utility patent.

The Federal Circuit agreed with the District Court that there was "no impediment to reading all the statutes

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6 As with any patented invention, farmers could be sued for patent infringement if they save and replant patented seed (in the absence of a license). The statutory right to exclude is the linchpin of the patent system, which means that a farmer's "right" to save seed must yield to the fundamental policies underlying the patent laws.

concerning plant protection in harmony" and that "the asserted conflict is simply the differences in the rights and obligations imposed by the two statutes." Pet. App. 6, 9. While Petitioners cite such differences to suggest that the PVPA and the patent laws are irreconcilable when applied to sexually reproduced plants, the fact that the PVPA contains some exceptions to its exclusive rights as a condition for its less rigorous showing to get a PVPA certificate disproves rather than proves any such conflict.[7] As the Federal Circuit recognized, "when two statutes are capable of co-existence, it is the duty of the courts, absent a clearly expressed congressional intention to the contrary, to regard each as effective." Pet. App. 6 (quoting *Radzanower v. Touche Ross & Co.*, 426 U.S. 148, 155 (1976)).

In effect, the PVPA created an interim level of protection for sexually reproduced plants that could not yet satisfy the utility patent laws. As of 1970, the PVPA was the only practically attainable protection for such plant inventions. Now, given the recent advances in science, a plant inventor may choose between the more rigorous and expensive pursuit of a utility patent, or obtaining a PVPA certificate with its easier showing, lower costs, but less statutory protection. Pet. App. 6. However, the current possibility of alternative modes of statutory protection cannot retroactively give rise to an implied repeal of the patent laws with respect to sexually reproduced plants. Because the two statutes grant different rights for different showings as to any

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[7] *In re Hibberd*, 227 U.S.P.Q. 443 (PTO Bd. App. & Interf.), does not relate directly to whether the sexually reproduced plants at issue here are statutory subject matter because the corn products in *Hibberd* had been altered to produce high levels of tryptophan and hence were "transgenic" and within section 101 under *Chakrabarty*. Even so, *Hibberd*'s analysis (*id.* at 446-47) as to how the patent laws and the PVPA provide different levels of protection for sexually reproduced plants is relevant.

new variety, Petitioners' claim that same attribute cannot be protected by two statutes is inapplicable.[8]

Petitioners also claim that the PVPA's legislative history shows that Congress "intended" in 1970 that sexually reproducing plants not be patented. In *Alexander v. Sandoval*, ___ U.S. ___, 121 S. Ct. 1511, 1520 (2001), this Court explained that "legal context matters only to the extent that it clarifies text." Yet Petitioners want the "contemporary legal context" for the PVPA to alter the meaning of the preexisting text of section 101 in the patent laws. As stated in *Sandoval*, this Court has "never accorded dispositive weight to context shorn of text." *Id.* Because the PVPA never even addresses the text of the patent laws, the alleged context of the PVPA cannot be used to narrow the scope of section 101.

The District Court cited two allegedly conflicting statements in the PVPA's legislative history. First, it noted a Senate report stating that "[n]o protection is available to those varieties of plants which reproduce sexually, that is, generally, by seeds."[9] Pet. App. 26. However, as explained, there is a key distinction between no protection being available because the statutory conditions for patentability in § 112 could not be satisfied for such plants (as of 1970) and no protection being legally possible because such plants are

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[8] Neither *Traffix Devices, Inc. v. Marketing Displays, Inc.*, ___ U.S. ___, 121 S. Ct. 1255 (2001), nor *Ropat Corp. v. McGraw-Edison Co.*, 535 F.2d 378 (7th Cir. 1976), supports Petitioners' broad proposition because each rejected an attempt to use a second federal statute to extend the term of a patent, which is not implicated here.

[9] *Cf. Vermont Agency of Natural Resources v. United States*, 529 U.S. 765, 783 n.12 (2000) (giving no interpretative significance to a sentence in a Senate report setting forth an erroneous understanding of the meaning of a statutory term enacted 123 years earlier).

outside the scope of section 101. As Congress' motivation for enacting the PVPA would be the same under either view, the mere enactment of the PVPA cannot provide any basis for interpreting the expansive scope of the patent laws as having been restricted by that enactment.

The second statement was that "[t]he committee ... finds that [the PVPA] does not alter the protection currently available within the patent system." Pet. App. 26. However, that statement is true whether patent protection for sexually reproduced plants was possible or not. If no patent protection was authorized under the terms of section 101, enacting the PVPA did not change that. However, if patent protection was possible, the PVPA would not undo that possibility because the two statutory schemes are clearly complementary, not mutually exclusive or conflicting. Moreover, the latter statement explicitly states that Congress did not intend to change any aspect of the utility patent laws, which confirms that the PVPA did not implicitly repeal any coverage for plants under section 101 encompassed by its preexisting terms.[10]

Finally, the plain meaning of the terms of section 101 shows why Petitioners' extensive reliance on *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 132-33 (2000), is misplaced. In that case, this Court interpreted the statute at issue (the FDCA) as itself foreclosing the jurisdiction over tobacco products that the FDA had invoked. As this Court stated, "[t]he inescapable conclusion is that there is no room

[10] Petitioners' *amici* recognize that Congress "saw no need to amend Title 35 to prevent plant breeders from overriding the exemptions from liability in the PVPA by also obtaining utility patents." Brief for Amici Malla Pollack, at 11 (filed May 2, 2001). If Congress did not override the clearly different protections afforded by the patent laws when enacting the PVPA, Petitioners cannot be allowed to achieve that result here.

for tobacco products within the FDCA's regulatory scheme." *Id.* at 143. If tobacco products were encompassed by the term "devices" under the FDCA, then the FDA would have been required to remove them from the market. *Id.* at 135. Hence, the subsequent, tobacco-specific legislation cited was consistent with the FDCA, and merely confirmed this Court's interpretation of its terms.

Here, the opposite is true. If the PPA and the PVPA had not been enacted, there would be no question that the terms of section 101 encompass sexually reproduced plants and that patents on such plants could be granted if the other statutory conditions for patentability were met. Unlike the post-FDCA tobacco legislation in *Brown & Williamson*, the PPA and PVPA were not intended to substitute for or alter the existing patent laws but were to establish standards and rights distinct from the patent laws to allow some federal protection for plants that could not yet be attained through the utility patent laws. Thus, *Brown & Williamson* does not support Petitioners' assertion that sexually reproduced plants ceased being statutory subject matter under section 101 upon the enactment of the PVPA.

Finally, this Court in *Chakrabarty* soundly rejected the assertion that "micro-organisms cannot qualify as patentable subject matter until Congress expressly authorizes such protection." 447 U.S. at 314.

> Congress, not the courts, must define the limits of patentability; but it is equally true that once Congress has spoken it is "the province and duty of the judicial department to say what the law is." *Marbury v. Madison*, 1 Cranch 137, 177, 2 L. Ed. 60 (1803). Congress has performed its constitutional role in defining patentable subject

> matter in § 101; we perform ours in construing the language Congress has employed.

447 U.S. at 315. Here, Petitioners also suggest that Congress would have to add an explicit reference to "sexually reproduced plants" in section 101 before potential utility patent coverage would be available. However, the necessary words to authorize that conclusion have been in the statute since 1793. Upon construing "the language of § 101 as it is," 447 U.S. at 318, it should be clear to this Court that sexually reproduced plants produced through man's plant breeding are statutory subject matter.

CONCLUSION

For the reasons stated herein, the judgment of the United States Court of Appeals for the Federal Circuit should be affirmed.

Respectfully submitted.

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